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## EUROPEAN PATENT APPLICATION

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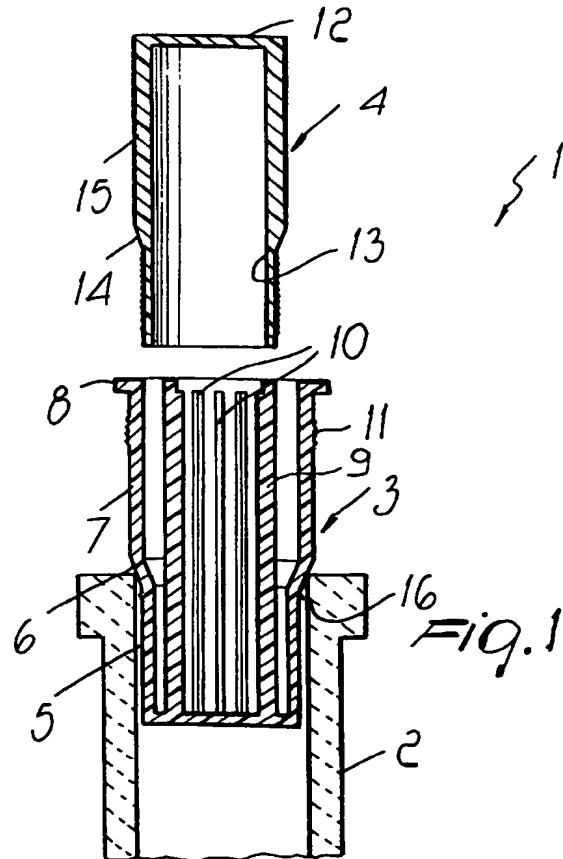
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### (54) Closure for bottles, particularly for bottles containing wine

(57) Closure for bottles, particularly for bottles containing wine, including two coaxial tubular members (3,4) having a mutual grip means (7,9,14) and a means (10,12) for engaging a tool for removing the closure from a bottle.



## Description

[0001] The present invention relates to a closure for bottles, particularly for bottles containing wine.

[0002] Cork stoppers are generally used to close bottles of wine or other beverages, because cork provides several advantages over other materials such as, for example, metal. However, corks of good quality are very expensive and, in general, may alter the taste of the wine over time.

[0003] An alternative is constituted by plastic stoppers, which are considerably cheaper but so far have not ensured a perfect seal on the mouth of the bottle and cause problems during removal.

[0004] The aim of the present invention is to provide a bottle closure which overcomes the problems of the prior art.

[0005] An object of the invention is to provide a bottle closure which is economic, being made preferably of plastic.

[0006] A further object of the invention is to provide a bottle closure which provides a reliable seal.

[0007] A further object is to provide a bottle closure which can be removed easily, for example with a conventional corkscrew.

[0008] This aim, these objects and others which will become apparent hereinafter are achieved by a bottle closure, particularly for bottles containing wine, characterized in that it comprises at least two coaxial tubular members which include a mutual grip means and a means for engaging a tool for removing the closure from a bottle.

[0009] Further characteristics and advantages will become apparent from the description of the closure, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

FIG. 1 is a sectional side view of the closure before being applied to the bottle;

FIG. 2 is a view, similar to FIG. 1, of the closure after it has been applied to the neck of the bottle;

FIG. 3 is an exploded view of the closure of FIGS. 1 and 2.

[0010] With reference to the above figures, the closure according to the invention, generally designated by the reference numeral 1, can be applied to the neck 2 of a conventional bottle used to contain liquid substances, for example wine.

[0011] Closure 1 includes two preferably tubular members 3 and 4 arranged one outside the other. The outer member 3 has a first lower tubular portion 5 whose diameter is smaller than the inside diameter of the neck 2 of the bottle and which is connected, through an inclined wall 6, to a second tubular portion 7 whose diameter is slightly greater than the inside diameter of

the neck 2 of the bottle and ends with an annular protrusion 8. A cylindrical portion 9 is provided inside member 3 and includes radial fins 10 which are preferably uniformly spaced.

[0012] Continuous peripheral raised portions 11 are provided outside of the portion 7 of member 3. It is possible, advantageously, to provide studs or the like (not shown in the figures) inside the portion 7 at the raised portions 11, so as to increase the force on the raised portions when the two members are mutually associated. Alternatively, the studs may be provided on the cylindrical portion with the same function.

[0013] Tubular member 4 is arranged inside member 3, between portion 7 and the cylindrical portion 9, and also includes a first lower portion 13 which is connected to a second tubular portion 15, through an inclined wall 14. The outside diameter of second tubular member 15 is, with good approximation, equal to the inside diameter of the portion 7 of member 3. Member 4 is open in a downward region and is closed in an upward region by a wall 12.

[0014] Member 3 also includes at least one outer annular raised portion 16 at the portion 5.

[0015] Closure 1 is normally in the assembled condition, with the two members 3 and 4 that compose it arranged coaxially one inside the other, as shown in FIG. 2.

[0016] The method for applying the closure according to the invention and the operation for removing the closure from the neck of the bottle are now described.

[0017] The closure is normally applied automatically, but it may also be applied manually.

[0018] The closure 1, with the two members 3 and 4 partially assembled, is rested on the mouth of the bottle.

[0019] The portion 5 of the member 3, which has a smaller diameter, enters the neck of the bottle 2, while the portion 7, which has a larger diameter, protrudes from the neck. By applying pressure above the closure, the tubular portion 7 of the member 3 enters the neck 2 of the bottle so as to form a hermetic seal, until the annular protrusion 8 abuts against the mouth of the bottle. The seal is further improved by virtue of the peripheral raised portions 11 provided around the member 3.

[0020] Simultaneously, the member 4 penetrates, with a tight interference fit, in the member 3 between portion 7 and the cylindrical portion 9, so as to ensure a perfect grip.

[0021] FIG. 2 illustrates a closure applied to the neck of the bottle.

[0022] In order to remove the closure it is possible to use a conventional corkscrew which, by perforating the wall 12 and biting into the fins 10, finds enough grip to draw out the entire closure. It should be noted that during removal of the closure, members 3 and 4 remain assembled.

[0023] The closure according to the invention can advantageously be used to re-close the bottle if the contents have not been used entirely. The raised portion 16

is advantageously provided for this purpose.

[0024] In practice, it has been found that the invention achieves the intended aim and objects.

[0025] The bottle closure according to the invention may have numerous modifications and variations, all within the inventive concept; furthermore, all the details may be substituted with technically equivalent elements

[0026] The materials employed, as well as the dimensions, may be any according to the specific needs and the state of the art.

[0027] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the scope of each element identified by way of example by such reference signs.

### Claims

1. Bottle closure, particularly for bottles containing wine, characterized in that it comprises at least two coaxial tubular members (3,4) comprising a mutual grip means (7,9,15) and a means (10,12) for engaging a tool for removing said closure from a

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2. Closure according to claim 1, characterized in that it comprises an outer member (3) which has a first lower tubular portion (5) whose diameter is smaller than the inside diameter of the neck (2) of the bottle and which is connected, by virtue of an inclined wall (6), to a second tubular portion (7) whose diameter is slightly greater than the inside diameter of the neck of the bottle and which ends with an annular protrusion (8).

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3. Closure according to claim 1 or 2, characterized in that it comprises a cylindrical portion (9) which is provided inside said outer member (3) and comprises radial fins (10).

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4. Closure according to one or more of the preceding claims, characterized in that continuous peripheral raised portions (11) are provided outside said portion (7) of said outer member (3).

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5. Closure according to one or more of the preceding claims, characterized in that it comprises an inner member (4) arranged inside said outer member (3), between said portion (7) and said cylindrical portion (9), and also comprises a first lower portion (13) which is connected to a second tubular portion (15) through an inclined wall (14), the outside diameter of said second tubular portion (15) being approximately equal to the inside diameter of said portion (7) of said outer member (3).

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6. Closure according to one or more of the preceding claims, characterized in that said inner member (4) is open in a downward region and closed in an upward region by a wall (12).

7. Closure according to one or more of the preceding claims, characterized in that said outer member (3) comprises at least one annular outer raised portion (16) at the lower tubular portion (5).

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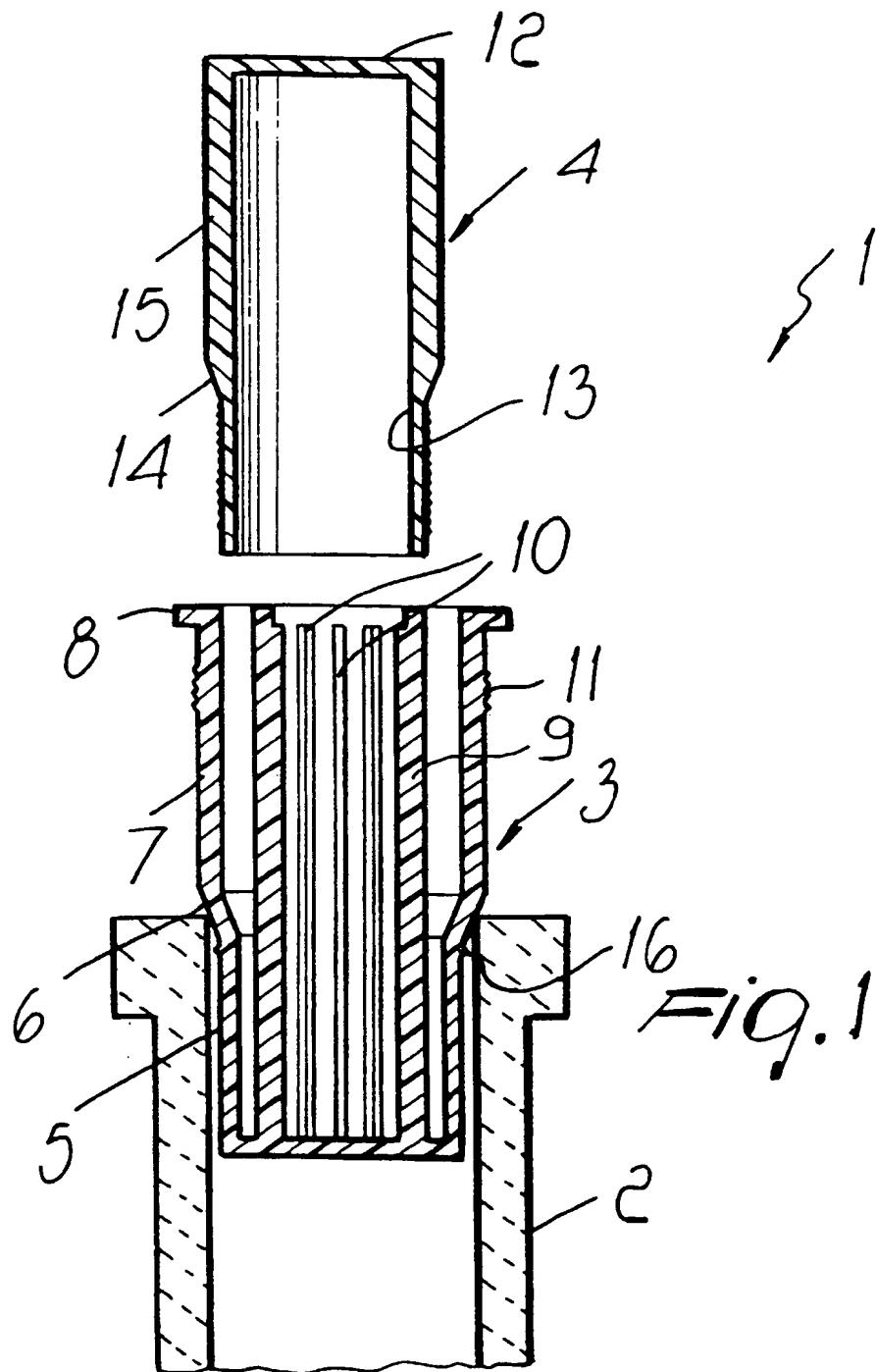
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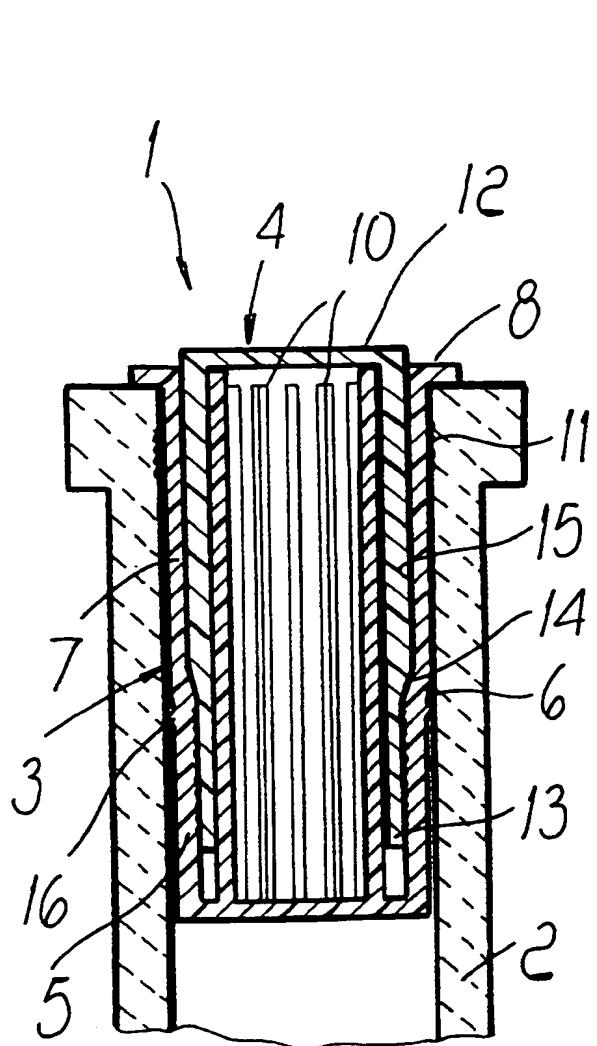


FIG. 2

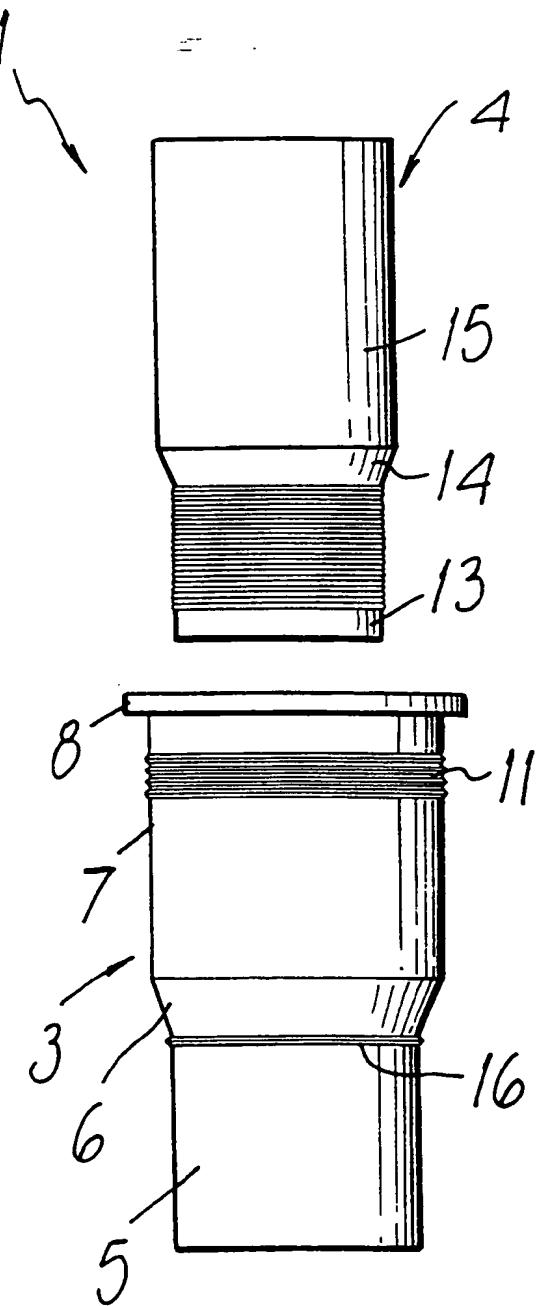


FIG. 3



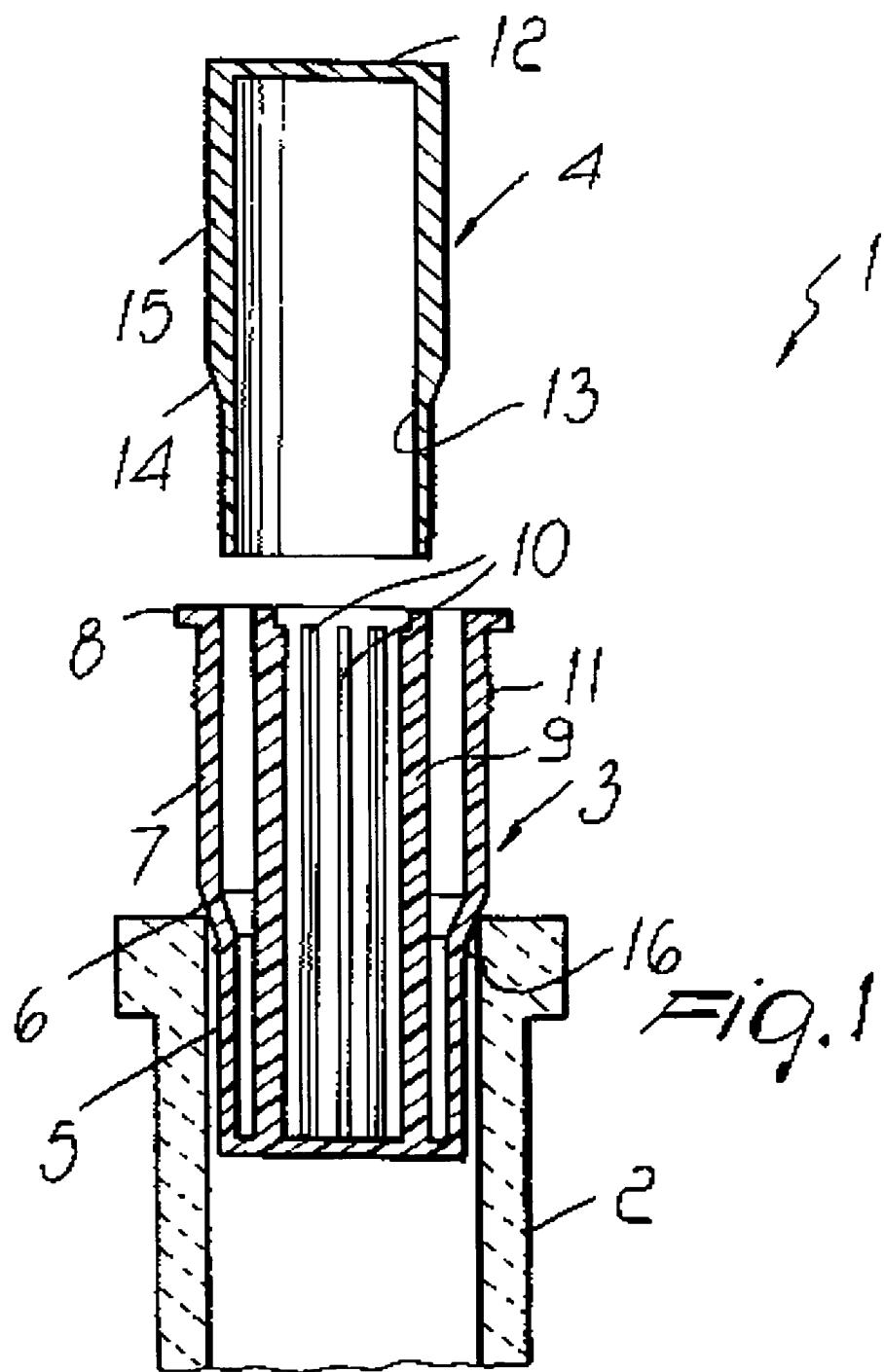
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## EUROPEAN SEARCH REPORT

Application Number

EP 98 11 3294

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.6)						
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim							
X A	DE 35 21 866 A (TOTH) 2 January 1987 * column 7, line 40 - line 50; claims 1-3; figures 1-4 *	1,4,6,7 2,3,5	B65D39/16						
A	FR 2 294 931 A (DEBALERI) 16 July 1976 * page 2, line 20 - line 40; figures 1-3 *	1-4							
A	FR 1 142 649 A (GRUSSEN) 20 September 1957 * page 1, column 2, line 3 - line 37; figures 1-4 *	1-4							
A	US 3 970 207 A (FAULSTICH) 20 July 1976 * column 1, line 62 - column 2, line 43; figures 1-3 *	1-4							
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			TECHNICAL FIELDS SEARCHED (Int.Cl.6)						
			B65D						
<p>The present search report has been drawn up for all claims</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Place of search</td> <td style="width: 33%;">Date of completion of the search</td> <td style="width: 34%;">Examiner</td> </tr> <tr> <td>THE HAGUE</td> <td>9 November 1998</td> <td>Vantomme, M</td> </tr> </table>				Place of search	Date of completion of the search	Examiner	THE HAGUE	9 November 1998	Vantomme, M
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THE HAGUE	9 November 1998	Vantomme, M							
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document							
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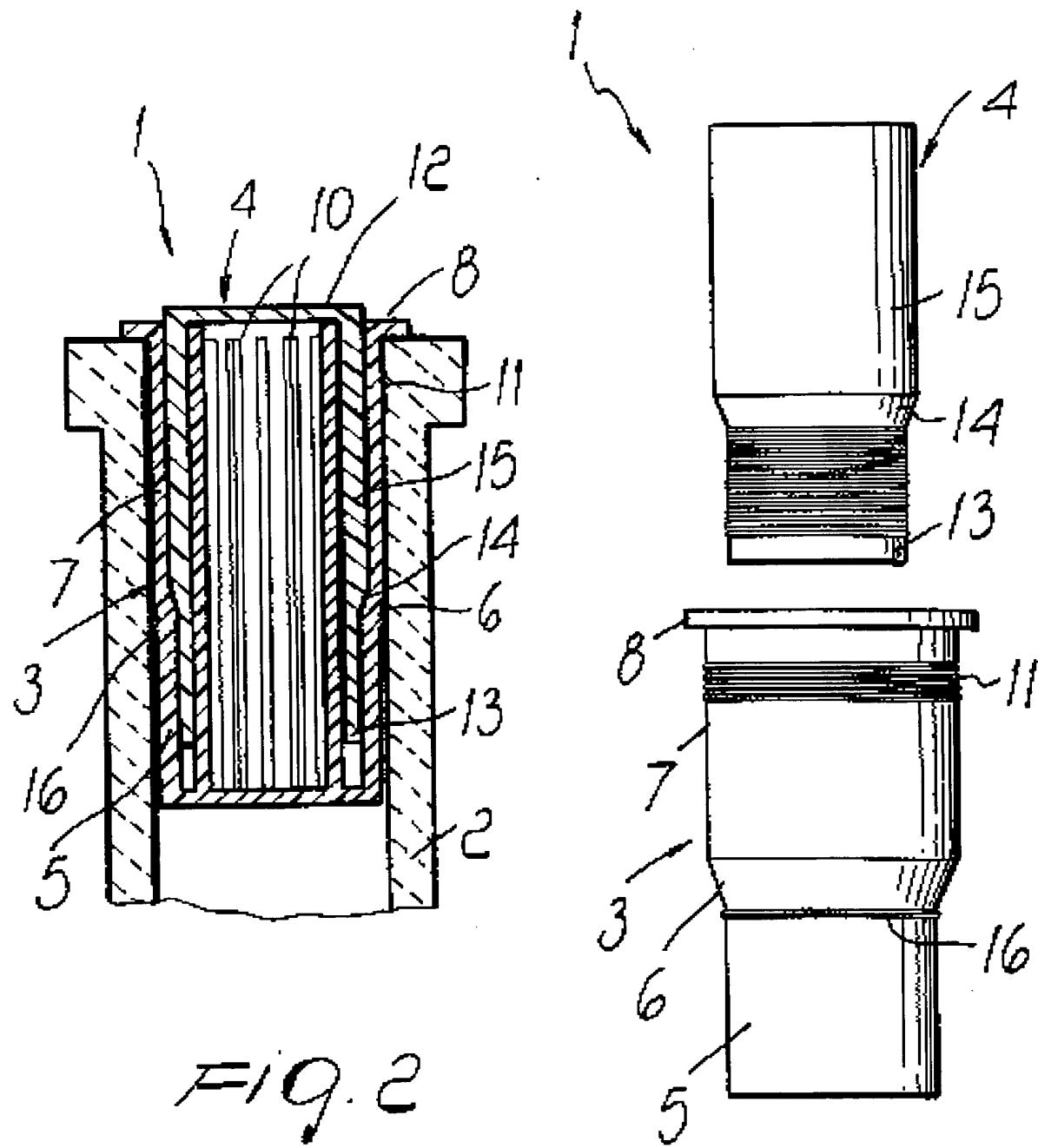


FIG. 3